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Subject: Naval Service Medical News (NSMN) 94-37

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SUBJ/PUBLIC AFFAIRS-NAVAL SERVICE MEDICAL NEWS (NSMN) (94-37)//  
POC/P.C. BISHOP/CAPT/MED-00P (PUBLIC AFFAIRS)/-/TEL:(202)653-  
1315/TEL:DSN 294-1315//

RMKS/1. THIS SERVICE IS FOR GENERAL DISTRIBUTION OF  
INFORMATION AND NEWS OF INTEREST TO NAVY AND MARINE CORPS  
MEMBERS, CIVILIAN EMPLOYEES, FAMILY MEMBERS AND RETIRED  
BENEFICIARIES OF NAVY MEDICINE. MAXIMUM AND TIMELY  
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ADDRESSEES IS ENCOURAGED. THIS MESSAGE HAS BEEN COORDINATED  
WITH THE COMMANDANT OF THE MARINE CORPS (CMC). THE COMMANDANT  
HAS AUTHORIZED TRANSMISSION TO MARINE CORPS ACTIVITIES.

2. HEADLINES AND GENERAL INTEREST STORIES THIS WEEK:  
(940304)-New Blood Substitute Being Developed by NMRDC  
(940305)-Military Readiness -- A Semper Fit Priority  
(940306)-Millington Signs Personal Excellence Partnership  
(940307)-He Works Magic in the Neurosurgical Field  
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(940310)-Navy Nurses Teach Trauma Course in Jacksonville (para 3)

HEADLINE: New Blood Substitute Being Developed By NMRDC  
NMRDC Bethesda, MD (NSMN) -- A promising blood substitute,  
Liposome Encapsulated Hemoglobin (LEH), that closely mimics red  
blood cells, is being developed by a group of Navy, academic and  
industrial scientists at the Naval Medical Research and  
Development Command. This oxygen-carrying protein resuscitation  
fluid, encased in microscopic droplets, can be prepared as a  
liquid or a freeze-dried product.

The Navy's LEH research program has had a successful history  
of progress, opportunities and challenges. Navy basic research  
in the 1980s provided the foundation for today's prospect of a  
commercial product.

On 14 September, a panel of expert military and civilian  
scientists, clinicians, research administrators and invited  
distinguished guests gathered at the Uniformed Services  
University of the Health Sciences in Bethesda to participate in a  
program review of the Navy's LEH research accomplishments.

NMRDC coordinated the program review with the assistance of  
Jack E. McKenzie, Ph.D., USUHS Associate Professor of Physiology.  
Following a day of presentations, the review panel was asked to  
evaluate the current status of the research program and to  
comment on the future course of the Navy's effort to develop a

blood substitute.

NMRDC's CAPT Shiela R. Weinberg, MSC, said, "The Navy has had long-standing requirements that document the need for blood products (red blood cells and platelets) and blood substitutes aboard ships and for combat casualties.

"At this time, there is no satisfactory substitute for oxygen-carrying red blood cells when treating severe hemorrhage. Freshly donated blood loses its usefulness rapidly unless refrigerated, requires cross-matching to minimize the ever-present risk of transfusion reactions, and can transmit diseases such as hepatitis, malaria, and HIV.

"The blood substitute LEH can be produced in virtually unlimited quantity, free from contamination by all disease-causing organisms, has a longer shelf-life than fresh donated blood, and requires no cross matching prior to administration."

Current research efforts focus on demonstrations of LEH efficacy (oxygen delivery), safety (immune response and vasoactivity), and the ability to manufacture the product on a large scale.

Operationally, the successful development of an artificial oxygen carrying resuscitative fluid would reduce the need for donated blood and reduce complications associated with blood banking (no histocompatibility antigens and elimination of transmitted infectious disease) and ease logistical burdens associated with blood delivery in the field.

Project Director Alan S. Rudolph, Ph.D., said, "LEH will not completely replace red blood cells. It is a temporary application of oxygen-carrying fluid intended to stabilize victims with blood loss that will be supplemented with already existing blood products.

"Blood substitutes would provide a temporary delivery of oxygen for combat casualties following a bleeding injury. This would allow the transport of combat casualty victims back to pre-positioned blood sources."

Story by Doris Ryan

-USN-

HEADLINE: Military Readiness -- A Semper Fit Priority

HQ USMC Arlington, VA (NSMN) -- Semper Fit is the Marine Corps health promotion program as set forth in Marine Corps Order 6200.4 of 8 May 1992. It is a very comprehensive health promotion program that combines previously existing programs under one umbrella.

Semper Fit contains seven elements: tobacco cessation; physical fitness and sports; back injury and muscle strain prevention; nutrition education and weight control; stress management and suicide prevention; alcohol and drug abuse prevention; and hypertension education. The program also addresses sexually transmitted diseases and HIV prevention.

When fully implemented and properly used, Semper Fit will help build a better Marine. The program is in direct support of two USMC strategic goals: No. 2 -- To conduct realistic, demanding and continuous training in order to ensure the readiness of Marines and their units and No. 3 -- To prepare

Marines and their families for the special demands placed upon a "force in readiness." The Corps strives for 100 percent readiness. This goal is attainable only when Marines are physically and mentally at their peak. Just as Marines learn the importance of properly maintaining their weapons, Semper Fit will help teach them proper care and preventive maintenance of themselves.

The program, through education and training, will provide Marines with the tools and incentives to reach the goal of optimum fitness and well-being. Ultimately, unit readiness will be increased as physical and emotional fitness improve resistance to disease, increase productivity and enhance quality of life. Clearly, health and fitness contribute to the retention of valuable Marines and create a significant cost saving to the government. In fact, worksite health promotion programs return two to three dollars for every dollar invested, according to the Journal of Occupational Medicine.

Maintaining a healthy lifestyle through Semper Fit will also help to increase job satisfaction and morale, reduce absenteeism, and ultimately improve combat readiness. Additionally, this commitment to promoting attitudinal changes and encouraging a healthy lifestyle will be extended to the entire Marine Corps family (active duty, reserve, retirees, family members and civilian personnel).

These changes can only occur through aggressive leadership that sets a healthy example for all Marines to emulate. Navy Surgeon General VADM Donald F. Hagen has stated, "It is gratifying to see more and more commanding officers becoming personally involved in the wellness issue." The support and involvement of leaders of Marines is crucial to the success of this program. But commanding officers will not have to go it alone: Semper Fit coordinators will manage the implementation of the program at all major installations and will assist in meeting all training requirements and in building healthier Marines.

If we are to improve operational readiness, we would do well to focus our efforts on "a major force detractor" -- tobacco usage. It is common knowledge that smoking is a cause of heart disease and cancer and that it is the major cause of preventable premature deaths in the United States. The military's 1992 Worldwide Survey identified the Marine Corps as having the highest smoking prevalence among the services. The rate of smokeless tobacco usage approached 50 percent of our young Marines, 24 years old and younger. Marines who use smokeless tobacco as a "safer" alternative to smoking will be made aware through Semper Fit that "smokeless" is not as innocuous as advertising suggests; it causes oral cancer and is a serious threat to their health. We know that the short-term effects of nicotine include increased heart rate, increased blood pressure, increased cholesterol, delayed wound healing and altered blood clotting, and constricted blood vessels, which leads to a slowing in circulation of oxygenated blood to organs and the brain. Smoking contributes to respiratory symptoms, reduced cardiorespiratory endurance and reduced muscular endurance. It is probably not surprising that smokers have been found to score

as much as 22 points less than non-smokers on their physical fitness tests.

According to Marine Corps Essential Subjects Handbook, stamina is the "most important aspect of fitness ... and includes cardiovascular fitness and muscular endurance." This translates into the "ability to march long distances with heavy loads, or to work long hours and still maintain the reserve to carry on in an emergency." Tobacco usage has been found to be "a detriment to physical fitness even among the relatively young, fit individuals."

The cost goes beyond fitness and readiness impairment. It is estimated that 38 million dollars is lost to the Marine Corps yearly in lost wages and absenteeism as a result of smoking. The Army estimates that the annual cost to them for one smoker is \$3,050.

How can we ignore these tobacco facts? We can't, and Semper Fit is designed to educate and improve the Corps, creating a healthier organization. Tobacco cessation is just one of the many elements it encompasses.

Semper Fit Marines and their leaders are members of the "ultimate health and fitness club" -- the United States Marine Corps.

Story by CDR Beverly Paige-Dobson, MSC, and Capt Grant Frey, USMC. Paige-Dobson, a Navy clinical psychologist, is the Health Affairs Officer, Headquarters, U.S. Marine Corps. Frey, a military police officer, is the Assistant Health Affairs Officer.

-USN-

HEADLINE: Millington Signs Personal Excellence Partnership

NAVHOSP Millington, TN (NSMN) -- Millington South Elementary School has been added to the list of schools supported by teams from local Navy commands and business leaders concerned with the quality of education in the community.

In a signing ceremony held in August at the headquarters of the Commander, Naval Coordinator Mid-South, a partnership among Naval Hospital Millington, Smith Investments and Millington South Elementary School was formalized.

RADM Stephen T. Keith, regional coordinator for the Personal Excellence Program, praised the naval hospital and Smith Investments for adopting the school. Emphasizing the importance of the partnership, Keith said that the primary goals are "to improve the education, health and fitness, and citizenship of our students and to establish an improved rapport with our community, emphasizing leadership and self-esteem."

The partnership was formed after RP3 Ranitra Hammonds, Personal Excellence Coordinator at the naval hospital, learned that the Navy's partnership with Millington South was in jeopardy due to the disestablishment of the Air Intermediate Maintenance Department (AIMD) at the Naval Air Station, which was the school's partner during the 1993-94 school year.

Hammonds sees the partnership as a collaborative effort to assist America's youth to become better educated, healthier and more responsible citizens.

Joining Hammonds at the ceremony were Nancy Rouse, the

school's principal; Don Lowry of Smith Investments; CAPT Ervin Ames, acting executive officer, and RPSR Chandra McCall, Personal Excellence Assistant Coordinator, Naval Hospital Millington; and James Haslip, public relations director for Memphis Shelby County schools.

Naval Hospital Millington also serves as the Navy partnership sponsor for Rosemark Academy.

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#### HEADLINE: He Works Magic in the Neurosurgical Field

NMC Oakland, CA (NSMN) -- Most everybody has the same number of hours in a day with which to work. What makes a difference is what you are able to do with that time. LCDR Mark Linskey, MC, a recent addition to the Neurosurgery staff at Naval Medical Center Oakland, seems to work magic with those hours, considering what he's accomplished so far.

In the eight years since he graduated from Columbia University College of Physicians and Surgeons in 1986, Linskey has won 10 awards and honors in addition to the 10 he had already received, earned eight certifications and licenses, been elected to 12 professional and scientific societies and taught six medical courses. He published 28 peer-review journal articles, nine book chapters in several medical tests and 13 abstracts. He was also the recipient of 10 research grants, made 28 presentations at professional meetings and was an invited lecturer on four different occasions. And he is only 34 years old.

His secret? "You have to compartmentalize your thinking and be very organized," said Linskey, who added, "and my wife is a saint." Perhaps his personal philosophy is an additional motivating factor in his success. "I really enjoy what I'm doing," he said. "I recommend that people find something they love and call it work."

His accomplishments do not come strictly from what he has achieved in a short time, they also reside in the research he has performed. In his first post-doctoral research fellowship at the Pittsburgh Cancer Institute, Linskey focused on two different projects. The first involved developing a new animal model for studying the radiobiology of stereotactic radiosurgery on benign brain tumors.

"Stereotactic radiosurgery is a means of precisely targeting and focusing a single dose of radiation so that even slowly dividing 'radioresistant' tumor cells are destroyed without affecting surrounding normal tissue," said Linskey.

His second project at Pittsburgh Cancer Institute involved applying the principles learned from studying the normal developmental biology of rodent glial cells (supporting cells for neurons in the brain that can give rise to malignant brain tumors -- gliomas) in order to study the biology of malignant rodent glial cells. Linskey did this by showing that by exposing rodent glioma cells to "differentiations agents" (a new class of drug) in cell culture, he could make them "mature" into genetically and biochemically less malignant cells.

In his second post-doctoral research fellowship, sponsored

by the National Cancer Institute, Linskey expanded his studies relating normal glial developmental biology to glioma biology. His work involved characterizing the two-dimensional and three-dimensional behavior in cell culture of the first human glioma cell line found to express all the genetic markers predicted from the study of rodent glial developmental biology.

"It is extremely exciting," said Linskey. "Up to that point, no one in the world had been able to make the jump from glial biology in the rodent system to the human system." In doing so, his research has "the potential for developing new inroads into glioma therapy." Developing new ways to treat gliomas is urgently needed since there have been no significant advances in therapy for this tumor in the last 15 years, he explained.

Linskey's work at the Naval Medical Center is to focus on patient care and teaching residents. He brings with him extensive clinical subspecialty training in surgical neuro-oncology, skull base surgery and vascular microneurosurgery.

During a typical day as a neurosurgeon, you have to juggle several things at once, while always thinking of the next step, he said. This may involve an upcoming surgery, patients in the ICU, planning out-patient care, preparing papers or lectures, as well as preparing administrative monthly reports. "You have to structure your day so that each thing is given a set time where you can focus directly on it," he said. "I have a lot of mental lists."

Recapping his medical career so far, he said, "There isn't one sword in the stone moment," but added that he feels fortunate to have studied under many good role models who guided him and were extremely generous teachers. Pursuing a medical education can be extremely rigorous, he said. "For teachers, the total amount of work doesn't change, but the focus shifts. Keeping residents inspired, motivated and still hungry for more becomes much more important. I'd like to give some of what I have received back to students," said Linskey, whose long-term goal is to teach as an "academic neurosurgeon."

Linskey chose a career in medicine because he liked the sciences but "wanted something that coupled dealing with people and positive contribution to society with making a living. Medicine is the best way to have an opportunity to do that."

Linskey was attracted to neurological surgery because it combined the highest level of skilled technical challenge with the complexity and logic of the neurological examination and neurological diagnosis.

Linskey chose the Navy because of a mutually beneficial program where the Navy pays for a student's education at any medical school in exchange for time after the student gets a degree. In his case, the Navy deferred his active-duty-pay-back time until he had completed a general surgery internship and a neurosurgery residency at the University of Pittsburgh, as well as his post-doctoral research fellowships. With this program, the military gets a fully trained doctor, and the doctor gets a career. "I wouldn't have been able to have this kind of education without the Navy's help," said Linskey.

Story by Georgianna Lear

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HEADLINE: Military Information Program on Hospice Care Begun

HFA Washington (NSMN) -- The Hospice Foundation of America has begun an information outreach program to military people and their families. The new program is intended to inform military personnel about hospice care for family members who are suffering from terminal illness -- to provide a caring, home or home-like environment to those for whom cure and recovery are no longer an option.

"The particularly difficult circumstances imposed on military personnel by long family separations, frequent moves and unpredictable operational deployments place a heavy burden on our military people," explained CAPT John Dewey, USN (Ret.), vice president of the Hospice Foundation. "This new outreach program is intended to assist military family members in coping with terminal illness and in finding the help they need, when they need it," he said.

Hospice is a special kind of care designed to provide comfort and support to patients and their families in the final stages of terminal illness. It seeks to enable patients to carry on their remaining days, weeks or months in an alert and pain-free manner, with symptoms under control, so that their dying days may be spent with dignity at home or in a home-like setting, surrounded by people who are sensitive to their special needs.

As part of the outreach program, the Hospice Foundation is providing information -- including pamphlets, video tapes and education teleconference seminars -- to military chaplains, family service centers and health care professionals at military bases in the United States and abroad, to assist them in helping military personnel understand and arrange hospice care when needed.

For additional information on hospice care or about the military outreach program, contact the Hospice Foundation of America, 1334 G St. NW, Suite 605, Washington, DC 20005; (202) 638-5419.

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3. Professional Notes: Information on upcoming symposiums, conferences or courses of interest to Navy Medical Department personnel and wrap-ups on ones attended. Anyone with information to share in this section should contact the editor (see the last paragraph of this message on ways to do so).

Scheduled Meetings:

-- 1-5 October 1994, the Seventh Annual Surgeon General's Leaders' Conference, Reston Hyatt Town Center Hotel, Reston, VA.

-- 17-28 October 1994, Operational Entomology Training, Navy Disease Vector Ecology and Control Center, Jacksonville, FL. For information, contact the DVECC Training Department at (904) 772-2424, DSN 942-2424, FAX (904) 779-0107.

-- 19-22 October 1994, ANSO's 14th Annual National Conference, Norfolk, VA (see article below).

-- 7-18 November 1994, CDC Epidemiology in Action course,

Atlanta, GA, call (404) 727-3485 for more information.  
Registration deadline is 15 September.

-- 13-18 November 1994, Association of Military Surgeons of the United States' Annual Meeting, "Unity Through Diversity," Orlando, FL, (301) 897-8800.

-- 20-24 March 1995, Shea-Arentzen Nursing Symposium 1995, "Navigating New Frontiers of Nursing Practice: The Challenges of Health Care Reform," La Jolla, CA. "Call for Papers" deadline is 15 September 1994. Contact CDR Chris Laurent, NC, or CDR Bill Aiken, NC, at DSN 522-6412 or (619) 532-6412 for more information.

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HEADLINE: ANSO Conference is 19-22 October in Norfolk

CNO Washington (NSMN) -- The Association of Naval Service Officers (ANSO) will hold its 14th Annual National Conference 19-22 October 1994 at Naval Air Station Norfolk BOQ and Breezy Point Officers' Club, Norfolk, VA. This year's theme is "Unido: Ni Un Paso Atras" (United: Not One Step Back).

ANSO's primary objective is to advance recruitment, retention and career development of Hispanic and other minority officers. ANSO's activities are consistent with recent Department of the Navy initiatives and focus on increasing minority accessions and retention.

For more information, see NAVADMIN 172/94 (CNO Washington DC msg, dtg 201352Z SEP 94) or contact COL Cecil Amparan, USMC, (703) 640-2354, DSN 278-2354; CAPT Thomas Contreras, USN, (619) 553-8420, DSN 584-8420; CAPT Bill Nieto, USNR, (202) 619-7020; CDR Hilario Mercado, USN, (703) 695-3883, DSN 225-3883; LCDR Raul Castaneda, USN, (703) 696-4877, DSN 226-4877; or write to ANSO, P.O. Box 10951, Arlington, VA 22210-1951.

-USN-

HEADLINE: Navy Nurses Teach Trauma Course in Jacksonville

NAVHOSP Jacksonville, FL (NSMN) -- As troops clamored on the beaches of Normandy 50 years ago, medics valiantly saved the lives of as many of their comrades as they could, but many died in the process. The wounded were eventually transferred to hospitals where nurses helped them recuperate.

Fifty years later, the anniversary of D-Day, nurses of naval hospitals throughout the southeast were brought together at Naval Air Station Jacksonville for a three-day course titled "The Trauma Nursing Core Course" (TNCC). The course teaches nurses how to treat and care for victims of war, accidents, motor vehicle crashes and other trauma injuries.

Naval Hospital Jacksonville co-sponsored the course with the Emergency Nurses Association, the national organization for emergency nursing.

The course was broken into several components, including hands-on care of volunteers with simulated injuries, intensive classroom instruction, and the proper use of equipment in trauma cases.

The first day of the course was spent examining how injuries occur and how they affect the body and its organs. The students



learned what to expect and look for in patients with traumatic injuries. They were also shown how to help diagnose and treat wounds using techniques like proper splinting, preparing for diagnostics tests, blood and IV fluid administration.

On the second day, instructors used cosmetic makeup, waxes and food coloring to simulate injuries to "patients" for the students to practice on. These injuries included simulated gunshot wounds, femur fractures and abdominal bleeding. During the exercise, the students were taught to handle equipment used in treating trauma victims, such as neck braces and backboards. They were also given time to familiarize themselves with the various types of splints and discussed the use of military anti-shock trousers (MASTs).

The final day of the course involved a written and practical exam where students used equipment to maintain a patient's airway, administer emergency lifesaving treatment and use procedures and tests to diagnose injuries. These challenges were intensified because the patient, simulating unconsciousness, was unable to speak.

The importance of this class has been twofold: First, the significance of being the only national class of this type taught by Navy nurses; and, second, the impact that such training has had on the participants.

Recently LTjg Patricia Taylor, NC, of Naval Hospital Jacksonville's Intensive Care Unit, was returning to her home when she witnessed an accident in which a bicyclist was struck by a car.

"When I stopped to render assistance," she said, "I found the young man was not breathing." She opened his airway, applying what she had learned during the three-day TNCC training. This time, it was for real.

Story by LTjg Mark Marino, NC

-USN-

4. Month of October observances, events occurring 8-19 October, and BUPERS important dates for October:

OCTOBER

Child Health Month (708/981-7871)

Family Health Month (1 800 274-2237)

National Breast Cancer Awareness Month

Disability Employment Awareness Month

Lupus Awareness Month (1 800 558-0121 or 301/670-9292)

National Dental Hygiene Month

National Family Sexuality Education Month (212/541-7800)

National Liver Awareness Month (1 800 223-0179 or 201/256-2550)

National Physical Therapy Month (703/706-3218)

Consumer Information Month

Talk About Prescriptions Month

Auto Battery Safety Month (1 800 331-2020)

9-13 October: Central Services Recognition Week (312/280-6156)

9-15 October: National Osteopathic Medicine Week

(1 800 621-1773, ext. 5854, or 312/280-5854)

9-15 October: Fire Prevention Week (617/984-7270)

10 October 1845: U.S. Naval Academy organized

10 October: Columbus Day Observed  
 10-16 October: American Heart Association's Heartfest  
 (1 800 AA-USA1)  
 11-15 October: National School Lunch Week (703/739-3900)  
 12 October: Disaster Awareness Day  
 12 October: Columbus Day  
 13 October 1775: Second Continental Congress passes  
 legislation authorizing acquisition of ships and  
 establishment of a Navy  
 16 October: World Food Day (202/653-2404)  
 16 October 1845: Ether used in operation  
 16-22 October: National Character Counts Week  
 16-22 October: National Infection Control Week (708/949-6052)  
 16-22 October: National Veterinary Technician Week  
 (317/742-2216)  
 17 October 1989: San Francisco Bay earthquake, 7.1 on Richter  
 Scale, killed 67 people and caused \$10 billion in damage  
 17-21 October: National Medical Assistants' Week  
 (312/899-1500)  
 17-22 October: National Patient Accountant Management Week  
 (202/857-1179)  
 19 October: National Medical Assistants' Day  
 BUREAU OF NAVAL PERSONNEL IMPORTANT DATES  
 3 October: CWO3 and CWO4 Board Convenes  
 11 October: Transfer/Redesignation Board Convenes  
 12 October: Night Detailing until 2200 (eastern time)  
 24 October: Reserve O-8 DC Board Convenes  
 25 October: Night Detailing until 2200 (eastern time)  
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5. ADDRESSEES ARE ENCOURAGED TO SUBMIT INFORMATION AND NEWS  
 ITEMS OF MEDICAL DEPARTMENT OR BENEFICIARY INTEREST (IN STORY  
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